

**UTILITY  
PATENT APPLICATION  
TRANSMITTAL**

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No. PTZ02  
First Inventor Rosen et al.  
Title Nucleic Acids, Proteins, and Antibodies  
Express Mail Label No.

**APPLICATION ELEMENTS**

See MPEP chapter 600 concerning utility patent application contents

**ADDRESS TO:**Assistant Commissioner for Patents  
Box Patent Application  
Washington, DC 20231

1. ☒ Fee Transmittal Form (e.g., PTO/SB/17)  
(Submit an original, and a duplicate for fee processing)
2. ☐ Applicant claims small entity status.  
See 37 CFR 1.27.
3. ☒ Specification [Total Pages 459]  
(preferred arrangement set forth below)  
- Descriptive title of the Invention  
- Cross Reference to Related Applications  
- Statement Regarding Fed sponsored R & D  
- Reference to sequence listing, a table,  
or a computer program listing appendix  
- Background of the Invention  
- Brief Summary of the Invention  
- Brief Description of the Drawings (if filed)  
- Detailed Description  
- Claim(s)  
- Abstract of the Disclosure
4. ☐ Drawing(s) (35 U.S.C. 113) [Total Sheets     ]
5. ☒ Oath or Declaration [Total Pages 5]  
a. ☒ Newly executed (original or copy)  
b. ☐ Copy from a prior application (37 CFR 1.63(d))  
(for continuation/divisional with Box 17 completed)  
c. ☐ **DELETION OF INVENTOR(S)**  
Signed statement attached deleting inventor(s) named in  
the prior application, see 37 CFR 1.63(d)(2) and 1.33(b)
6. ☒ Application Data Sheet. See 37 CFR 1.76. (13 pages).  
The entire disclosure of all applications claimed for priority on the  
Application Data Sheet are considered a part of the disclosure of the  
present application and are hereby incorporated by reference in their  
entirety.

7. ☐ CD-ROM or CD-R in duplicate, large table or Computer  
Program
8. Nucleotide and/or Amino Acid Sequence Submission  
(if applicable, all necessary)  
a. ☒ Computer Readable Form (CRF)  
b. Specification Sequence Listing on:  
i. ☒ CD-ROM or CD-R (2 copies); or  
ii. ☐ paper  
c. ☒ Statement under 1.821 verifying identity of above copies

**ACCOMPANYING APPLICATION PARTS**

9. ☒ Assignment Papers (cover sheet and document(s))
10. ☐ 37 CFR 3.73(b) Statement ☐ Power of Attorney
11. ☐ English Translation Document (if applicable)
12. ☐ Information Disclosure Statement/ Form PTO/SB/08  
☐ Copies of Citations
13. ☐ Preliminary Amendment
14. ☒ Return Receipt Postcard (MPEP 503)  
(should be specifically itemized)
15. ☐ Certified copy of Priority Document(s)  
(if foreign priority is claimed)
16. ☐ Request and Certification under 35 U.S.C.  
122(b)(2)(B)(i). Applicant must attach form PTO/SB/35 or  
its equivalent.
17. ☒ Other:  
a Transmittal and Submission Under 37 C.F.R. §§ 1.824 and 1.52(e);

17. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment,  
or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☐ Continuation-in-Part (CIP) of prior application No:      /       
Prior application information. Examiner Group/Art Unit:      /     

For CONTINUATION OR DIVISIONAL APPS only. The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the  
accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted  
application parts.**18. CORRESPONDENCE ADDRESS**☒ Customer Number or Bar Code Label22195or ☐ Correspondence address below

NAME

ADDRESS

CITY

STATE

ZIP CODE

COUNTRY

TELEPHONE

FAX

NAME (Print/Type)

Kenley K. Hoover

Registration No (Attorney/Agent)

40,302

SIGNATURE

by Jonathan Klein (Reg. No. 41,119)Date 1/17/01

FEE TRANSMITTAL for FY 2001 <i>Patent fees are subject to annual revision.</i>				Complete if Known																																																																																																																																																																																					
				Application Number		Unassigned																																																																																																																																																																																			
				Filing Date		Herewith																																																																																																																																																																																			
				First Named Inventor		Rosen et al.																																																																																																																																																																																			
				Examiner Name		Unassigned																																																																																																																																																																																			
				Group Art Unit		Unassigned																																																																																																																																																																																			
Total amount of payment		(\$)		902.00		Attorney Docket Number																																																																																																																																																																																			
						PTZ02																																																																																																																																																																																			
METHOD OF PAYMENT (CHECK ONE)				FEE CALCULATION (CONTINUED)																																																																																																																																																																																					
1. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge indicated fees and credit any overpayment to: Deposit Account Number <b>08-3425</b> Deposit Account Name <b>Human Genome Sciences, Inc.</b>  <input checked="" type="checkbox"/> Charge Any Additional Fee Required Under 37 CFR §§ 1.16 and 1.17  <input type="checkbox"/> Applicant claims small entity status See 37 CFR 1.27  <input type="checkbox"/> Payment Enclosed: <input type="checkbox"/> Check <input type="checkbox"/> Credit Card <input type="checkbox"/> Money Order <input checked="" type="checkbox"/> Other Charge any deficiencies or credit any overpayments in the fees or fee calculations of Parts 1, 2 and 3 below to Deposit Account No. 08-3425				3. ADDITIONAL FEES <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">Large Entity</th> <th colspan="2">Small Entity</th> <th rowspan="2">Fee Description</th> <th rowspan="2">Fee Paid</th> </tr> <tr> <th>Fee Code</th> <th>Fee (\$)</th> <th>Fee Code</th> <th>Fee (\$)</th> </tr> </thead> <tbody> <tr><td>105</td><td>130</td><td>205</td><td>65</td><td>Surcharge - late provisional filing fee or cover sheet</td><td></td></tr> <tr><td>127</td><td>50</td><td>227</td><td>25</td><td>Surcharge - late provisional filing fee or cover sheet</td><td></td></tr> <tr><td>139</td><td>130</td><td>139</td><td>130</td><td>Non-English specification</td><td></td></tr> <tr><td>147</td><td>2,520</td><td>147</td><td>2,520</td><td>For filing a request for <i>ex parte</i> reexamination</td><td></td></tr> <tr><td>112</td><td>920</td><td>112</td><td>920</td><td>Requesting publication of SIR prior to Examiner action</td><td></td></tr> <tr><td>113</td><td>1,840</td><td>113</td><td>1,840</td><td>Requesting publication of SIR after Examiner action</td><td></td></tr> <tr><td>115</td><td>110</td><td>215</td><td>55</td><td>Extension for reply within first month</td><td></td></tr> <tr><td>116</td><td>390</td><td>216</td><td>195</td><td>Extension for reply within second month</td><td></td></tr> <tr><td>117</td><td>890</td><td>217</td><td>445</td><td>Extension for reply within third month</td><td></td></tr> <tr><td>118</td><td>1,390</td><td>218</td><td>695</td><td>Extension for reply within fourth month</td><td></td></tr> <tr><td>128</td><td>1,890</td><td>228</td><td>945</td><td>Extension for reply within fifth month</td><td></td></tr> <tr><td>119</td><td>310</td><td>219</td><td>155</td><td>Notice of Appeal</td><td></td></tr> <tr><td>120</td><td>310</td><td>220</td><td>155</td><td>Filing a brief in support of an appeal</td><td></td></tr> <tr><td>121</td><td>270</td><td>221</td><td>135</td><td>Request for oral hearing</td><td></td></tr> <tr><td>138</td><td>1,510</td><td>138</td><td>1,510</td><td>Petition to institute a public use proceeding</td><td></td></tr> <tr><td>140</td><td>110</td><td>240</td><td>55</td><td>Petition to revive - unavoidable</td><td></td></tr> <tr><td>141</td><td>1,240</td><td>241</td><td>620</td><td>Petition to revive - unintentional</td><td></td></tr> <tr><td>142</td><td>1,240</td><td>242</td><td>620</td><td>Utility issue fee (or reissue)</td><td></td></tr> <tr><td>143</td><td>440</td><td>243</td><td>220</td><td>Design issue fee</td><td></td></tr> <tr><td>144</td><td>600</td><td>244</td><td>300</td><td>Plant issue fee</td><td></td></tr> <tr><td>122</td><td>130</td><td>122</td><td>130</td><td>Petitions to the Commissioner</td><td></td></tr> <tr><td>123</td><td>50</td><td>123</td><td>50</td><td>Petitions related to provisional applications</td><td></td></tr> <tr><td>126</td><td>240</td><td>126</td><td>240</td><td>Submission of Information Disclosure Statement</td><td></td></tr> <tr><td>581</td><td>40</td><td>481</td><td>40</td><td>Recording each patent assignment per property (times number of properties)</td><td>40.00</td></tr> <tr><td>146</td><td>710</td><td>246</td><td>355</td><td>Filing a submission after final rejection (37 CFR 1.129(a))</td><td></td></tr> <tr><td>149</td><td>710</td><td>249</td><td>355</td><td>For each additional invention to be examined (37 CFR 1.129(b))</td><td></td></tr> <tr><td>179</td><td>710</td><td>279</td><td>355</td><td>Request for Continued Examination (RCE)</td><td></td></tr> <tr><td>169</td><td>190</td><td>169</td><td>900</td><td>Request for expedited examination of a design application</td><td></td></tr> </tbody> </table>				Large Entity		Small Entity		Fee Description	Fee Paid	Fee Code	Fee (\$)	Fee Code	Fee (\$)	105	130	205	65	Surcharge - late provisional filing fee or cover sheet		127	50	227	25	Surcharge - late provisional filing fee or cover sheet		139	130	139	130	Non-English specification		147	2,520	147	2,520	For filing a request for <i>ex parte</i> reexamination		112	920	112	920	Requesting publication of SIR prior to Examiner action		113	1,840	113	1,840	Requesting publication of SIR after Examiner action		115	110	215	55	Extension for reply within first month		116	390	216	195	Extension for reply within second month		117	890	217	445	Extension for reply within third month		118	1,390	218	695	Extension for reply within fourth month		128	1,890	228	945	Extension for reply within fifth month		119	310	219	155	Notice of Appeal		120	310	220	155	Filing a brief in support of an appeal		121	270	221	135	Request for oral hearing		138	1,510	138	1,510	Petition to institute a public use proceeding		140	110	240	55	Petition to revive - unavoidable		141	1,240	241	620	Petition to revive - unintentional		142	1,240	242	620	Utility issue fee (or reissue)		143	440	243	220	Design issue fee		144	600	244	300	Plant issue fee		122	130	122	130	Petitions to the Commissioner		123	50	123	50	Petitions related to provisional applications		126	240	126	240	Submission of Information Disclosure Statement		581	40	481	40	Recording each patent assignment per property (times number of properties)	40.00	146	710	246	355	Filing a submission after final rejection (37 CFR 1.129(a))		149	710	249	355	For each additional invention to be examined (37 CFR 1.129(b))		179	710	279	355	Request for Continued Examination (RCE)		169	190	169	900	Request for expedited examination of a design application	
				Large Entity		Small Entity		Fee Description	Fee Paid																																																																																																																																																																																
Fee Code	Fee (\$)	Fee Code	Fee (\$)																																																																																																																																																																																						
105	130	205	65	Surcharge - late provisional filing fee or cover sheet																																																																																																																																																																																					
127	50	227	25	Surcharge - late provisional filing fee or cover sheet																																																																																																																																																																																					
139	130	139	130	Non-English specification																																																																																																																																																																																					
147	2,520	147	2,520	For filing a request for <i>ex parte</i> reexamination																																																																																																																																																																																					
112	920	112	920	Requesting publication of SIR prior to Examiner action																																																																																																																																																																																					
113	1,840	113	1,840	Requesting publication of SIR after Examiner action																																																																																																																																																																																					
115	110	215	55	Extension for reply within first month																																																																																																																																																																																					
116	390	216	195	Extension for reply within second month																																																																																																																																																																																					
117	890	217	445	Extension for reply within third month																																																																																																																																																																																					
118	1,390	218	695	Extension for reply within fourth month																																																																																																																																																																																					
128	1,890	228	945	Extension for reply within fifth month																																																																																																																																																																																					
119	310	219	155	Notice of Appeal																																																																																																																																																																																					
120	310	220	155	Filing a brief in support of an appeal																																																																																																																																																																																					
121	270	221	135	Request for oral hearing																																																																																																																																																																																					
138	1,510	138	1,510	Petition to institute a public use proceeding																																																																																																																																																																																					
140	110	240	55	Petition to revive - unavoidable																																																																																																																																																																																					
141	1,240	241	620	Petition to revive - unintentional																																																																																																																																																																																					
142	1,240	242	620	Utility issue fee (or reissue)																																																																																																																																																																																					
143	440	243	220	Design issue fee																																																																																																																																																																																					
144	600	244	300	Plant issue fee																																																																																																																																																																																					
122	130	122	130	Petitions to the Commissioner																																																																																																																																																																																					
123	50	123	50	Petitions related to provisional applications																																																																																																																																																																																					
126	240	126	240	Submission of Information Disclosure Statement																																																																																																																																																																																					
581	40	481	40	Recording each patent assignment per property (times number of properties)	40.00																																																																																																																																																																																				
146	710	246	355	Filing a submission after final rejection (37 CFR 1.129(a))																																																																																																																																																																																					
149	710	249	355	For each additional invention to be examined (37 CFR 1.129(b))																																																																																																																																																																																					
179	710	279	355	Request for Continued Examination (RCE)																																																																																																																																																																																					
169	190	169	900	Request for expedited examination of a design application																																																																																																																																																																																					
Subtotal (1) <b>\$710</b>				Subtotal (3) <b>\$ 40.00</b>																																																																																																																																																																																					
2. EXTRA CLAIM FEES <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Large Fee Code</th> <th>Entity Fee (\$)</th> <th>Small Fee Code</th> <th>Entity Fee (\$)</th> <th>Fee Description</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr> <td>Total claims</td> <td>24</td> <td>- 20**</td> <td>4</td> <td>80</td> <td>Claims in excess of 20</td> <td>\$72.00</td> </tr> <tr> <td>Indep. claims</td> <td>4</td> <td>- 3**</td> <td>1</td> <td>80</td> <td>Independent claims in excess of 3</td> <td>\$ 80.00</td> </tr> <tr> <td>Multiple Dependent</td> <td></td> <td></td> <td></td> <td></td> <td>Multiple dependent claim</td> <td>\$</td> </tr> </tbody> </table>					Large Fee Code	Entity Fee (\$)	Small Fee Code	Entity Fee (\$)	Fee Description	Fee Paid	Total claims	24	- 20**	4	80	Claims in excess of 20	\$72.00	Indep. claims	4	- 3**	1	80	Independent claims in excess of 3	\$ 80.00	Multiple Dependent					Multiple dependent claim	\$	Other fee (specify): Other fee (specify):  *Reduced by Basic Filing Fee Paid																																																																																																																																																									
	Large Fee Code	Entity Fee (\$)	Small Fee Code	Entity Fee (\$)	Fee Description	Fee Paid																																																																																																																																																																																			
Total claims	24	- 20**	4	80	Claims in excess of 20	\$72.00																																																																																																																																																																																			
Indep. claims	4	- 3**	1	80	Independent claims in excess of 3	\$ 80.00																																																																																																																																																																																			
Multiple Dependent					Multiple dependent claim	\$																																																																																																																																																																																			
Subtotal (2) <b>(\$ 152.00)</b>				Subtotal (2) <b>(\$ 152.00)</b>																																																																																																																																																																																					
Submitted By				Complete (if applicable)																																																																																																																																																																																					
Name (Print/Type) Kenley K. Hoover				Registration No.: 40,302		Telephone 301-610-5771																																																																																																																																																																																			
Signature: <i>Kenley K. Hoover</i>				Date: 1/17/01																																																																																																																																																																																					

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of: Rosen et al.

Application Serial No.: Unassigned

Group Art Unit: Unassigned

Filed: Herewith

Examiner: Unassigned

For: Nucleic Acids, Proteins, and Antibodies

Attorney Docket No.: PTZ02

**TRANSMITTAL AND SUBMISSION UNDER  
37 C.F.R. §§ 1.824 and 1.52(e)**

Commissioner For Patents  
Washington, D.C. 20231

Sir:

In accordance with 37 C.F.R. §§ 1.821(e) and 1.824, Applicants submit herewith a Sequence Listing satisfying the computer readable format requirements on a compact disc (CD-R) labeled "CRF." Applicants submit concurrently herewith a Statement Under 37 C.F.R. § 1.821.

Additionally, in accordance with 37 C.F.R. §§ 1.52(e), 1.821, and 1.823, Applicants submit herewith a Sequence Listing as an electronic document on two identical compact discs (CD-R). Applicants certify under 37 C.F.R. § 1.52(e)(4) that these two compact discs, labeled "Copy 1" and "Copy 2," are identical. These compact discs, formatted for an IBM-PC machine and compatible with the MS-Windows operating system, contain the following files:

Document	File Name	Size in bytes	Date of Creation
Sequence Listing	PTZ02_seqList.txt	152,183	01/15/2001
V Viewer Setup File	SetupDLL.exe	695,808	12/19/2000
V Viewer Help File Controller	v.cnt	7,984	01/05/2001
V Viewer Program File	v.exe	753,664	12/19/2000
V Viewer Help File	v.hlp	447,766	01/05/2001

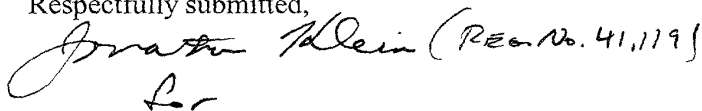
Pursuant to 37 C.F.R. § 1.52(e)(3)(ii), Applicants note that the Sequence Listing may be viewed on an IBM-PC machine running the MS-Windows operating system by using the V viewer software, licensed by HGS, Inc., included on the compact discs (see World Wide Web URL: <http://www.fileviewer.com>). To use the V viewer, the SetupDLL.exe file must first be executed to install required files. The V viewer can then be

PTZ02-9879760

opened by executing the v.exe file from the compact disc. Once open, the V viewer can be used to open and view the Sequence Listing and Tables from the compact disc. Further instructions for use of the V viewer may be obtained using the Help function from within the V viewer software.

Date: 17 JANUARY 2001

Respectfully submitted,

 (Reg. No. 41,119)  
K

Kenley K. Hoover (Reg. No. 40,302)  
Attorney for Applicants

**Human Genome Sciences, Inc.**  
9410 Key West Avenue  
Rockville, MD 20850  
Telephone: (301) 610-5771

KKH/mjh  
Enclosures